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THE PARADOX OF UNEMPLOYMENT AND JOB VACANCIES

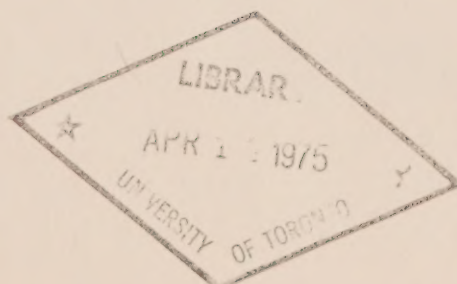
SOME THEORIES CONFRONTED BY DATA

Number 9



Ministry of
Labour

Research Branch
Toronto, Ontario





THE PARADOX OF UNEMPLOYMENT AND JOB VACANCIES

SOME THEORIES CONFRONTED BY DATA

Number 9

by

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Research Branch

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Hon. John P. MacBeth
Minister

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FOREWORD

During 1974, a great deal of public attention was directed toward what appeared to be an important paradox in the labour market. This paradox involved the simultaneous occurrence of unprecedented numbers of job vacancies, together with relatively high rates of unemployment.

As part of its programme of labour market analysis and information, the Ministry of Labour asked two of its research economists to look at this question. Working with the limited data available, they attempted to outline the quantitative dimensions of the paradox and to offer some interpretation. Their conclusions reported here should be of interest to government officials, employers and employees, unions, and to the general public.

The authors' conclusions emphasize some of the less publicized factors contributing to the observed paradox. However, they have stressed that due to weaknesses of the available data, their findings are tentative and do not represent the official position of the Ministry. At present, the Ministry is working with various Federal Government agencies to obtain data that will improve its information on the Ontario labour market.

This paper concentrates on the labour market situation in Ontario as of mid-1974. There are some signs that the vacancy problem has eased as the economy has slowed down in recent weeks. However, some of the questions raised in the paper are likely to be as topical when the economy picks up again as they were during most of 1974.

J. R. Kinley,
Director,
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THE PARADOX OF UNEMPLOYMENT AND JOB VACANCIES: SOME THEORIES CONFRONTED BY DATA

Recently there has been much concern over widespread indications of serious manpower shortages in Ontario occurring simultaneously with reports of persistent unemployment. In spite of the development of very sophisticated models of the labour market over the last decade, it remains nearly impossible to answer some of the most fundamental questions about the actual state of the labour market. The development of labour market information has not kept pace with the development of theory.

The purpose of this paper is to see just how well available data enable us to come to grips with the apparent paradox of simultaneous vacancies and unemployment. The paper begins by considering possible explanations of purported paradox, and then examines the data. The principal conclusions are stated in summary form at the end of the paper.

POSSIBLE EXPLANATIONS OF THE PARADOX

There are four possible explanations of the apparent paradox.

I. Over-reaction to specific instances of recruiting difficulties

According to this explanation, there are not significant shortages of labour in general. There may be acute difficulty recruiting (and holding) specific types of labour in particular places, and these difficulties have led to erroneous generalizations about the state of the total labour market. A further part of this explanation is that many of the supposed vacancies do not actually exist at present, but are highly dependent upon uncertain capital investment plans. It is difficult to reconcile the reports of an urgent vacancy situation with the most recent evidence on the performance of the Canadian economy. By the middle of 1974 the economy had 'slowed sharply' (Canadian Business Review, Summer, 1974, p.8). Gross National Product showed no change in the second quarter, and industrial production declined at a seasonally-adjusted rate by more than 11 per cent - the largest decline since the Fall of 1970 (with the exception of the rail strike induced decline of Summer 1973). During the third quarter of 1974, real GNP showed a decline of 0.1 per cent at annual rates.

In spite of the recent economic slowdown, the existence of widespread job vacancies would be difficult to deny for anyone who has been exposed to the continual stream of reports over the last year from trade associations, business and industry spokesman, employment agencies, and local development groups. If the

vacancy situation is becoming acute, that fact should be at least partially revealed in data from Statistics Canada's Job Vacancy Survey.

II. Ambiguous measurement of unemployment

The essence of this explanation is that the Labour Force Survey counts as unemployed many people who have only slight, if any, interest in working. If those persons who are "voluntarily" unemployed, or extremely "choosy" about what kind of job they accept were excluded from the count, then, it is argued, the unemployment rate would be lower. Proponents of this explanation maintain that the changes in the Unemployment Insurance Act in 1971 encourage short-term entrance into the labour force of persons with weak attachment to the work force. Some labour market analysts believe that changes in the unemployment insurance scheme could have caused the unemployment rate to be a half to one full percentage point higher than it would have been otherwise.¹ Unfortunately, in our view, the labour force and unemployment data presently available do not facilitate the kind of analysis necessary to resolve this question - although they do lend to some general impressions, discussed later.

III. Increased friction in the labour market

This explanation is closely related to the previous one, as it assumes an increase in voluntary turnover on the part of employees. It differs from the previous explanation in that it assumes an increase in turnover even for those with relatively strong labour force attachment. The argument is that a combination of increased turnover rates and longer search between jobs would result in increased average rates of unemployment and job vacancy. Emphasis is clearly on the behaviour and attitudes of workers. Factors contributing to increased turnover are said to be changes in the work ethic, increased concern over working conditions, and improvements in welfare and unemployment insurance. Also relevant would be the increase in the numbers of youth who have 'a pattern of job hopping and shopping'.

The significance of these factors is yet to be proved. However, it is accepted that increased turnover and longer search periods between jobs tend to occur naturally as the labour market becomes tighter. When the number of job opportunities per worker increases, it becomes more rational for workers to shop for the 'best' job. Thus, an increase in the duration of unemployment

¹This is the conclusion of H.G. Grubel, D. Maki, and S. Sax, "Real and Insurance Induced Unemployment in Canada", mimeo, Simon Fraser University, 1974.

between jobs can be a result as well as a cause of increased difficulty filling vacancies. Unfortunately, no data on turnover rates are available, but there are data on duration of unemployment and vacancies.

IV. Increased structural imbalance in the labour market

Structural imbalance exists when the characteristics of labour supply - age, sex, skills, training, education, occupation, experience, location - do not fit those of the employers' labour requirements. There is some reason to believe that structural imbalance has worsened recently, resulting in the simultaneous increase of vacancies and unemployment. During the relatively slow growth period before 1973, the training, up-grading, and experience provided by employers may not have been adequate to assure the availability of sufficient skilled manpower for an expansion phase. Insofar as this explanation is valid, some of the blame for the vacancy problem can be placed on employers who regard qualified manpower as if it flowed from a tap to be turned on and off instantaneously in response to immediate needs rather than as a stock of human resources to be planned for and developed. Another aspect of the educational system, in particular over-reaction of students planners, and institutions to the "surplus situation" which faced many graduates in 1971 and 1972. Also, contributing to structural imbalance, there appear to have been significant sectoral and geographical shifts in industrial activity, and hence in the demand for qualified labour, to which the supply side has not yet caught up.

The purpose of this paper is to confront these theoretical explanations with such data as are available. Before generating unrealistic expectations that definitive answers can be given, it should be pointed out that the data presently available are not adequate for the task. It simply is not possible to sort out satisfactorily the influence of the various possible explanatory factors, and thereby devise the optimal policy to alleviate the situation. However, some useful insight is provided and some tentative conclusions are suggested. While emphasizing present deficiencies in data, one should keep in mind that it is possible to improve our labour market information capabilities to the point where these theories could be tested and the problems analyzed sufficiently to provide a basis for the development of appropriate policy.

EXAMINATION OF THE DATA

1. Trends in job vacancies

The total number of job vacancies in Ontario has increased each year since the Statistics Canada Job Vacancy Survey began in 1970. However, as Table 1 shows, the percentage increase (based on the average for the first six months of each year) between 1973 and 1974 (28.6 per cent) was considerably less than the increase (76.1 per cent) for 1972 to 1973. In one occupational category - sales - the number of vacancies decreased between 1973 and 1974. In service and in construction, the increase in 1973-74 was quite small compared to the previous year. The largest increases in vacancies in 1973-74 were in the machining, managerial, and sciences categories.

These three occupational categories also had below average percentage increases in employment during 1973-74, in fact no increase at all for the sciences (see Table 2). This suggests a very sluggish supply response to increased demand. Three other occupational groups for which strong demand appeared to have been met by weak supply responses were medicine and health, product fabricating and assembly, and transport equipment operating. In contrast, sales and service occupations had two of the largest increases in employment. Large increases in employment were registered also for processing and materials handling, but these were outstripped by expanding demand.

In terms of increases in vacancies and apparent responsiveness of employment, the various occupational groups can be divided into the following categories:

- | | |
|-----------------------------------|---------------------------|
| I. LARGE INCREASE IN VACANCIES: | - Managerial |
| SMALL OR/NO INCREASE IN | - Natural Sciences, |
| EMPLOYMENT | Engineering, Math. |
| | - Medicine and Health |
| | |
| II. LARGE INCREASE IN VACANCIES: | |
| AVERAGE INCREASE IN | - Machining |
| EMPLOYMENT | |
| | |
| III. SIGNIFICANT BUT DECELERATING | - Processing |
| INCREASE IN VACANCIES: LARGE | - Clerical |
| INCREASE IN EMPLOYMENT | - Material Handling |
| | |
| IV. SIGNIFICANT BUT DECELERATING | - Product Fabricating and |
| INCREASE IN VACANCIES: SMALL | Assembly |
| INCREASE IN EMPLOYMENT | - Transport Equipment |
| | Operating |
| | |
| V. DECREASE IN VACANCIES OR | |
| SUBSTANTIAL DECELERATION: | - Sales |
| LARGE INCREASE IN | |
| EMPLOYMENT | |

TABLE 1

First Half Year Average Full-Time Vacancies by Occupational Group
Ontario, 1971-1974

C.C.D.O. Code	Occupational Group	Number of Vacancies Monthly Average January - June				Change Between Years			Change as % of Previous Year		
		1971	1972	1973	1974	1971-72	1972-73	1973-74	1971-72	1972-73	1973-74
11 -	Managerial, Admin.	460	693	800	1256	233	107	456	50.7	15.4	57.0
21 -	Natural Sciences, Eng. and Math.	945	703	1578	2401	-242	875	823	-25.6	124.5	52.2
31 -	Medicine and Health	610	797	1153	1504	187	356	351	30.7	44.7	30.4
41 -	Clerical	2355	2584	4176	5576	229	1592	1400	9.7	61.6	33.5
51 -	Sales	1111	1534	2524	2233	423	990	-291	38.1	64.5	-11.5
61 -	Service	797	1479	3354	3798	682	1875	444	85.6	126.8	13.2
81/82 -	Processing	339	1171	1573	2178	832	402	605	245.4	34.3	38.5
83 -	Machining	592	1157	2585	4329	565	1428	1744	95.4	123.4	67.5
85 -	Prod. Fab. Assemb. and Repairs	912	2394	4746	6029	1482	2352	1283	162.5	98.2	27.0
87 -	Construction Trades	592	716	1255	1441	124	539	186	20.9	75.3	14.8
91 -	Transport Equip.	289	547	723	912	258	176	189	89.3	32.2	26.1
93 -	Material Handling	355	756	935	1129	401	179	194	113.0	23.7	20.7
	Occupations n.e.c.	1328	846	1675	2039	-482	829	364	36.3	98.0	21.7
All occupations		10685	15377	27077	34825	4692	11700	7748	43.9	76.1	28.6

SOURCE: Canada Department of Manpower and Immigration, Monthly Report on Current Job Vacancies, January 1971 to June 1974.

This table is based on unpublished data from Statistics Canada's Job Vacancy Survey. Users are cautioned that the monthly data are less reliable than the quarterly data published by Statistics Canada.

TABLE 2

Change in Employment by Occupational Groups
First Half Year Averages Ontario: 1973-1974

C.C.D.O. Code	Occupational Group	Number Employed (000's) Monthly Average - January - June 1973	1973-1974	Change as a % of 1973
11 -	Managerial and Administration	204	207	1.47
21 -	Natural Sciences, Eng. and Math.	124	124	-
31 -	Medicine and Health	144	145	0.69
41 -	Clerical	595	627	5.38
51 -	Sales	353	380	7.65
61 -	Service	363	390	7.44
81/82 -	Processing	141	155	9.93
83 -	Machining	128	133	3.91
85 -	Prod. Fab., Assemb. and Rep.	374	378	1.07
87 -	Construction Trade	220	225	2.27
91 -	Transport Equipment	136	137	0.74
93 -	Material Handling	93	101	8.60
	Occupations, n.e.c. (23, 25, 27, 33, 37, 71, 73, 75, 77)	438	452	3.20
All occupations		3,313	3,454	4.23

SOURCE: Statistics Canada. Unpublished data from Labour Force Survey.

The underlying labour market problems may be different for each of these groups. For Group I the main problem may be an insufficient number of graduates, related to recent decreases in post-secondary enrolment. Similarly, for Group II, there may be inadequate numbers of persons completing apprenticeship and other training programmes. Group III shows signs of self-correcting action, but the increase in vacancies suggests turn-over problems. Group IV is similar to Group I, but with a substantially smaller rate of increase in vacancies. For two of the occupational categories (construction and transport equipment operating), apprenticeship and training may be the bottleneck, but the persistence of unfilled openings in fabricating and assembly requires a different explanation. The market appears to be working the best for Group V, especially sales. The service category, if further disaggregated, may reveal a variety of dissimilar labour market situations. Indeed, further disaggregation and more detailed analysis would be necessary to make definitive judgements about all of the Groups.

2. Growth of aggregate labour supply

In aggregate, vacancies increased at a substantially greater percentage rate than employment. This is not a surprising occurrence for an expanding economy. However, when there has been no real growth for at least two successive quarters, then the discrepancy between the rate of growth of vacancies and that of employment merits some explanation. One possible explanation which can be eliminated here is that of inadequate growth of aggregate labour supply. Table 3 shows that the 1973-74 growth in labour force for males was identical to the growth in employment, whereas in the two previous periods labour force growth lagged behind employment. The male labour force increased by substantially more in 1973-74 than in 1972-73. Labour force growth appears to have been less of a constraint on employment growth during 1973-74 than during 1971-72 or 1972-73. However, there is no way of telling from the Table whether male employment growth might have been greater in 1973-74 had the labour force grown faster. For females though, it does not appear that labour force growth was a constraint on employment growth during 1973-74.

3. Unemployment and vacancies

A helpful way of looking at the labour market which, to our knowledge, has not been used is to examine the ratio of unemployment to vacancies. Although each series comes from a different type of survey with different coverage, each should be consistent over a short period of time, making trends in the

TABLE 3

Changes in Total Labour Force, Employment and Unemployment,
By Sex, Monthly Averages for First Half Year: Ontario
(Thousands)

	Sex	1971-72	1972-73	1973-74
Change in Labour Force	Male	84	55	73
	Female	54	75	72
Change in Employment	Male	99	74	73
	Female	58	76	68
Change in Unemployment	Male	-14	-20	0
	Female	- 5	0	4

Source: Statistics Canada. The Labour Force, monthly reports, catalogue 71-001.

ratio meaningful.* Trends in the aggregate U/V ratio are shown in Tables 4 and 5. A definite downward trend is evident in annual figures for 1971-73, as well as in the first quarter figures for 1971-74. The ratio was four times as great in the first quarter of 1971 as in the first quarter of 1974. The most reasonable interpretation of this trend is a substantial tightening of the labour market.

Perhaps the most striking feature of Tables 4 and 5 is that both vacancies and unemployment increased between 1973 and 1974, in contrast to 1971-72 and 1972-73 when a decrease in unemployment coincided with an increase in vacancies. Since there was not an extraordinary increase in the labour force between 1973 and 1974, the 1973-74 change in the labour market situation can be described as one of paradox. However, in view of the

* The reliability and internal consistency of the various labour market indicators have been examined in numerous working papers in the Research Branch of the Ministry of Labour, particularly, A.Cornwall, Tests on the Unemployment and Job Vacancy Related Statistics Contained in the "Report on Registered Clients and Vacancies" of the Canada Department of Manpower and Immigration. Research Branch, Ontario Ministry of Labour, October 1974. (Internal Document).

TABLE 4

Vacancies and Unemployment: Annual Averages
Ontario 1971-1973

Year	(1) Total Vacancies	(2) Unemployed	(3) Ratio	(4) Index of (3) 1971=100
1971	15,000	170,000	11.33	100
1972	26,400	162,000	6.14	54.2
1973	33,100	142,000	4.29	37.9

Year	Full-Time Vacancies	Unemployed	Ratio	Index of (3) 1971=100
1971	13,100	170,000	12.98	100
1972	23,700	162,000	6.84	52.7
1973	30,200	142,000	4.70	36.2

Year	Full-Time Longer-Term Vacancies	Unemployed	Ratio	Index of (3) 1971=100
1971	4,700	170,000	36.17	100
1972	6,900	162,000	23.48	64.9
1973	10,900	142,000	13.03	36.0

SOURCE: Statistics Canada. Quarterly Report on Job Vacancies, First Quarter, 1974, Catalogue 71-002; The Labour Force, monthly reports, Catalogue 71-001.

TABLE 5

Vacancies and Unemployment: First Quarter Averages
Ontario 1971-1974

Year	(1) Total Vacancies	(2) Unemployed	(3) Ratio	(4) Index of (3) 1971=100
1971	10,200	200,000	19.61	100
1972	14,000	186,700	13.34	68.0
1973	27,100	167,300	6.17	31.5
1974	36,200	176,700	4.88	24.9

Year	Full-Time Vacancies	Unemployed	Ratio	Index of (3) 1971=100
1971	9,200	200,000	21.74	100
1972	12,400	186,700	15.06	69.3
1973	24,800	167,300	6.75	31.1
1974	31,700	176,700	5.57	25.6

Year	Full-Time Longer-Term Vacancies	Unemployed	Ratio	Index of (3) 1971=100
1971	3,000	200,000	66.67	100
1972	4,500	186,700	41.49	62.2
1973	7,800	167,300	21.45	32.2
1974	14,500	176,700	12.19	18.3

SOURCE: Statistics Canada. Quarterly Report on Job Vacancies, First Quarter 1974, Catalogue No. 71-002, Quarterly;
Statistics Canada. The Labour Force, monthly reports, Catalogue No. 71-001.

continual tightening of the labour market, the paradox probably results from a combination of the encountering, in 1974, of structural bottlenecks and the quite rational increase in job search time induced by the tighter labour market situation.

Of course the pattern of shopping for the best job is supported by Unemployment Insurance. However, the changes in the Unemployment Insurance Act which some persons blame for the persistence of job vacancies in 1974 were made in 1971. Yet the perverse behaviour in the job vacancy and unemployment series did not occur until 1974, after a period of economic recovery and considerable tightening of the labour market. Moreover, it appears that application of unemployment insurance claimant control measures has been more stringent in 1974 than during 1971-73. Why didn't the 1971 changes in the Unemployment Insurance Act produce the labour market paradox in 1972 or 1973? The likely answer is that there was too much slack in the labour market then. Unemployment Insurance would have little impact upon labour market¹ behaviour at a time when it is extremely difficult to get a job in the first place, or to regain one after leaving employment. On the other hand, when the labour market is tight, it is rational to shop for the best job, and Unemployment Insurance may be reinforcing that behaviour, rather than causing it. Recognition of this reinforcing role played by Unemployment Insurance should not lead us to lose sight of what are probably more important causes of the difficulties in filling vacancies - a general expansion of demand for labour a lack of training and on-the-job experience during 1971-73, regional and sectoral shifts in labour demand, and a failure to learn how to utilize, adequately, women, youths, and various minorities.

4. Changes in vacancies and unemployment by occupation

In aggregate between the first quarter of 1973 and 1974, the U/V ratio decreased slightly; vacancies increased by about 35.8 per cent; and the unemployed increased by about 5.6 per cent. Only in transport equipment operating (and a residual group of occupations) did unemployment go down while vacancies went up.

¹Part of the reason for the time lag might be that it took most people some time to become aware of the opportunities provided by the changes in the Unemployment Insurance Act. Our interest in unemployment insurance in this paper centres on its possible contribution to the unemployment-vacancy paradox. We are not specifically concerned with other questions about unemployment insurance, such as its cost implications.

These occupations had labour markets with well above average slack, and that might be why they behaved 'normally'. Sales had little change between first quarters, and as discussed earlier, the labour market for this group appeared to be adjusting adequately. Table 6 shows that the tightest occupational labour markets were those for managerial and professional, processing and machining, and clerical; the most slack labour markets were construction, transport equipment operating and service. The U/V ratios for construction and transport equipment operating show extreme seasonality, getting down near the average for all occupations during the third quarter.

5. Duration of vacancies and unemployment

Table 7 shows a very slight decrease in full-time vacancies as a proportion of total vacancies occurring early in 1974 probably as employers resorted more to part-time workers in a tighter labour market. Longer term vacancies showed a significant increase in the first quarter of 1974.¹ This suggests a worsening of structural problems and/or an increase in job search periods, but it does not support the hypothesis of increased turnover.

In order to assess the relative importance of these two factors - worsening structural imbalances or lengthened job search patterns - it is necessary to look at the longer term unemployment ratio as well as the longer term vacancy ratio.

Table 8 shows that longer term unemployment as a proportion of total unemployment decreased from 1971 to 1973 back to about the 1970 level. Looking at averages for the first eight months of each year, we see that the decline in the longer term proportion of unemployment has continued into 1974, although at a decreasing rate. The fact that the long term unemployment ratio decreased tends to support the hypothesis that worsening structural imbalance, rather than increases in job search time, is the main cause of the paradox. If people were spending a longer time searching between jobs, the longer-term unemployment ratio would go up, not down. Unfortunately, the period of time which the data source forces us to use for defining 'longer-term' unemployment - four months may be too long to pick up an increase in job search time, e.g. from five weeks to six weeks. Yet, it is not too long a period to pick up increases in unemployment that are induced by Unemployment Insurance, for which twenty weeks might be the likely duration.

1. Unfortunately, at present, it is not possible to get tabulations of longer-term vacancies as a proportion of total full-time vacancies by occupation for Ontario.

TABLE 6

Vacancies and Unemployment: Quarterly
By Occupational Group, Ontario, 1973-1974

ALL OCCUPATIONS

Year	(1) Full-Time Vacancies	(2) Unemployed	(3) U/V	(4) Index of (3) First Qtr. 1973=100
1973 1Q	24,806	153,633	6.19	100
2Q	29,346	122,400	4.17	67.4
3Q	36,337	110,333	3.04	49.1
4Q	30,423	118,400	3.89	62.8
1974 1Q	31,750	164,267	5.17	83.5

MANAGERIAL AND PROF.

Year	Full-Time Vacancies	Unemployed	U/V	Index of (3) First Qtr. 1973=100
1973 1Q	3,640	10,966	3.01	100
2Q	3,423	12,366	3.61	119.9
3Q	4,517	15,067	3.34	111.0
4Q	5,970	10,467	1.75	58.1
1974 1Q	4,623	11,233	2.43	80.7

CLERICAL

Year	Full-Time Vacancies	Unemployed	U/V	Index of (3) First Qtr. 1973=100
1973 1Q	4,453	21,800	4.90	100
2Q	3,897	19,167	4.92	100.4
3Q	4,893	18,300	3.74	76.3
4Q	4,170	17,400	4.17	85.1
1974 1Q	5,807	22,667	3.90	79.6

TABLE 6 (Cont'd)

Vacancies and Unemployment: Quarterly
By Occupational Group, Ontario, 1973-1974

SALES

Year	(1) Full-Time Vacancies	(2) Unemployed	(3) U/V	(4) Index of (3) First Qtr. 1973=100
1973 1Q	2,390	10,633	4.45	100
2Q	2,657	7,433	2.80	62.9
3Q	2,520	8,033	3.19	71.7
4Q	2,160	9,633	4.46	71.7
1974 1Q	2,390	11,000	4.60	103.4

SERVICE

Year	Full-Time Vacancies	Unemployed	U/V	Index of (3) First Qtr. 1973=100
1973 1Q	2,370	16,933	7.14	100
2Q	4,337	16,733	3.86	54.1
3Q	4,340	14,467	3.33	46.6
4Q	2,883	17,533	6.08	85.2
1974 1Q	2,873	20,300	7.07	99.0

PROCESSING AND MACHINING

Year	Full-Time Vacancies	Unemployed	U/V	Index of (3) First Qtr. 1973=100
1973 1Q	9,790	25,767	2.63	100
2Q	8,017	28,333	3.53	134.2
3Q	12,327	25,133	2.04	77.6
4Q	10,423	24,033	2.31	87.3
1974 1Q	10,807	35,633	3.30	125.5

TABLE 6 (Cont'd)

Vacancies and Unemployment: Quarterly
By Occupational Group, Ontario, 1973-1974

CONSTRUCTION

Year	(1) Full-Time Vacancies	(2) Unemployed	(3) U/V	(4) Index of (3) First Qtr. 1973=100
1973 1Q	887	33,400	37.66	100
2Q	1,623	19,400	11.95	31.7
3Q	3,000	12,333	4.11	10.9
4Q	1,160	19,000	16.38	43.5
1974 1Q	1,017	33,400	32.84	87.2

TRANSPORT

Year	Full-Time Vacancies	Unemployed	U/V	Index of (3) First Qtr. 1973=100
1973 1Q	727	10,167	13.98	100
2Q	720	5,967	8.29	59.3
3Q	1,197	5,333	4.46	31.9
4Q	563	6,000	10.66	76.3
1974 1Q	980	9,333	9.52	68.1

ALL OTHER OCCUPATIONS

Year	Full-Time Vacancies	Unemployed	U/V	Index of (3) First Qtr. 1973=100
1973 1Q	2,323	21,400	9.21	100
2Q	2,897	15,567	5.37	58.3
3Q	3,200	11,667	3.65	39.6
4Q	3,147	14,333	4.55	49.4
1974 1Q	3,247	20,700	6.38	69.3

SOURCE: Canada Department of Manpower and Immigration. Monthly Report on Current Job Vacancies, January 1971 to June 1974.

The figures on vacancies are based on unpublished data from Statistics Canada's Job Vacancy Survey. Users are cautioned that the monthly data are less reliable than the quarterly data published by Statistics Canada.

and

The figures on unemployed were derived from unpublished data on labour force and employment from the Statistics Canada Labour Force Survey. The reader should note that due to high sampling variability the estimates of unemployed are not as reliable as estimates of labour force or employment.

TABLE 7

Full-Time and Full-Time Longer-Term Vacancies
As Proportions of Total Vacancies Ontario
Annual Averages 1971-73 and First Quarter 1971-74

7A: FULL-TIME VACANCIES		(1) Full-Time Vacancies	(2) Total	(3) (1) As % of (2)
1971	Annual Average	13,100	15,000	90.17
1972	"	23,700	26,400	89.77
1973	"	30,200	33,100	91.24
1971	1Q	9,200	10,200	90.20
1972	1Q	12,400	14,000	88.57
1973	1Q	24,800	27,100	91.51
1974	1Q	31,700	36,200	87.57

7B: FULL-TIME LONGER-TERM VACANCIES		Full-Time Vacancies	Total	(1) As % of (2)
1971	Annual Average	4,700	15,000	31.33
1972	"	6,900	26,400	26.14
1973	"	10,900	33,100	32.93
1971	1Q	3,000	10,200	29.41
1972	1Q	4,500	14,000	32.14
1973	1Q	7,800	27,100	28.78
1974	1Q	14,500	36,200	40.06

SOURCE: Statistics Canada. Quarterly Report on Job Vacancies,
First Quarter 1974, Catalogue No. 71-002.

TABLE 8

Duration of Unemployment: Ontario
Annual Averages 1970-73 and Eight Month
Averages (January to August) for 1970-1974

		Unemployed Less Than 4 Months		Unemployed 4 Months and Over		Total	
		Number	%	Number	%	Number	%
Annual Average	1970	93	69.9	40	30.1	133	100.0
	1971	105	62.1	64	37.9	169	100.0
	1972	107	66.0	55	34.0	162	100.0
	1973	99	69.2	44	30.8	143	100.0
Average Jan.- Aug.	1970	98	71.0	40	29.0	138	100.0
	1971	114	61.6	71	38.4	185	100.0
	1972	112	65.5	59	34.5	171	100.0
	1973	102	68.5	47	31.5	149	100.0
	1974	110	70.5	46	29.5	156	100.0

SOURCE: Statistics Canada. The Labour Force, monthly reports,
Catalogue 71-001.

Turning again to the bottom of Table 8, we note that the ratio of longer term unemployment to total unemployment for 1974 is still slightly above the 1970 figure, even though the labour market appeared to be considerably tighter in 1974 than in 1970. This suggests that we may be pressing against the limit to which long-term unemployment can be reduced (about 25 to 30 per cent of total) without major changes in the way we utilize manpower. The notion that the labour market presently is very tight and that the remaining unemployment results mainly from serious structural problems, is further supported by evidence on the composition of unemployment presented in the next section.

6. The composition of unemployment

Examination of the composition of unemployment indicates which groups have the most serious unemployment problems. Table 9 giving monthly figures for 1973 and 1974, shows the preponderance of youth among the unemployed. The unemployment rate for persons aged 25-64 has been below 3 per cent since May, and the rate for the 45-64 has gone below 2 per cent in each of the past two summers. By contrast, the rate for the 14-19 group exceeds 9 per cent, and the 20-24 rate is over 6 per cent.

Also important, but less publicized, is unemployment of females, shown in Table 10. Between 1971 and 1974, as the labour market grew tighter over-all, the number of unemployed females (over 25 years of age) increased while the number of unemployed males decreased substantially. In 1969, the overall unemployment rate was just above 3 per cent, regarded as full employment. The rate for males 25 and over in 1974 is only a fraction above what it was in 1969. However, the unemployment rate for females is about one and a half percentage points higher in 1974 than it was in 1969.

It has been argued that youths and females do not have the degree of labour force attachment that mature males have, and that this explains their higher unemployment rates. It is perhaps more likely that the weaker labour force attachment of these groups is a consequence of their higher unemployment rates than a cause of it.¹ They have not had the opportunity to develop labour attachment.

The five years preceding the present tight labour market conditions were years of very low economic growth, during which persons without work experience and skills in high demand could not break into good jobs even if they tried. Table 12 taken from a paper by Sylvia Ostry, shows how little growth took place in Canada, particularly in manufacturing, forestry, and construction, during 1967-72, compared to the upsurge in 1973. It is doubtful that adequate training or experience was provided during 1967-72 for the expansion needs of 1973-74. At the same

1. To be more accurate, the weaker labour force attachment of these groups is a consequence of the fact that they have faced generally less attractive job opportunities than have prime aged males.

time, the difficulties which graduates in many fields encountered finding appropriate jobs discouraged students from entering or continuing post secondary studies. Thus the 'manpower pipeline' was broken; and when broken, it cannot be repaired overnight.

An additional piece of information which supports the 'broken pipeline' view and which casts doubt on the 'unwillingness to work' hypothesis, is the dramatic increase in the rate of rejection by employers of persons referred by Canada Manpower Centres. Table 13 shows the ratio of placements made through the centres to referrals from the centres. There has been a continual decrease in this ratio, especially during the first four months of 1974.

This table raises some interesting questions as to why employers are turning down so many people when they are having a hard time filling vacancies. An alternative explanation is that an increasing proportion of the referrals are people who do not want the jobs for which they are referred, and are making only token appearances in order to continue receiving Unemployment Insurance. No doubt some of the referrals fit this description. However, if an increase in token appearances were the main reason for the decline in the placement ratio, one would have expected to find a substantial increase in referrals in 1974. In fact, the increase in referrals in 1974 was very small compared to the longer-term trend in referrals - even though the average unemployment for January to April went up between 1973 and 1974. The decline in placements was so large that the placement-referral ratio would have fallen below 32 per cent even if referrals had remained constant in 1974. In short, this alternative explanation is not supported by the data, and we are left with the conclusion that most of the people who are now unemployed are not regarded by employers as worth hiring, in spite of what many claim is a desperate vacancy situation.

There is one remaining piece of information which casts some doubt on the significance of the contribution of Unemployment Insurance to unemployment. Earlier we have shown that the most serious unemployment problem, by far, is among youth. Table 14 shows that although persons under 21 made up 32 per cent of the unemployed at the end of the second quarter of 1974, they accounted for only 13 per cent of the Unemployment Insurance claimants. One of the main reasons for this is that a high proportion of unemployed youth have not yet had their first job, and therefore are not eligible for Unemployment Insurance. The important point is that Unemployment Insurance does not appear to be a very significant factor in supporting the unemployment of the group which has the most serious unemployment problem. This is contrary to the criticism that the youth take undue advantage of the unemployment insurance system.

TABLE 9

Labour Force, Employed, Unemployed and Unemployment Rates
By Age Group, Monthly - January 1973 - September 1974: Ontario

(In Thousands)	1973												1974								
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
LABOUR FORCE																					
14-19	305	301	300	326	347	468	499	476	323	340	349	358	347	351	354	362	395	448	538	535	369
20-24	475	482	475	473	508	540	535	534	470	481	476	485	487	489	491	508	549	564	559	569	509
25-44	1517	1529	1527	1547	1539	1546	1526	1530	1562	1582	1586	1586	1577	1590	1602	1613	1634	1651	1636	1639	1645
45-64	1023	1033	1038	1036	1040	1026	1011	1016	1022	1043	1047	1049	1050	1049	1051	1045	1041	1042	1035	1046	1062
65+	69	65	70	71	71	69	64	66	65	67	68	66	70	69	65	65	65	63	58	61	65
TOTAL*	3460	3491	3473	3504	3485	3532	3471	3515	3493	3555	3567	3578	3598	3616	3628	3639	3662	3646	3667	3742	3701
EMPLOYED																					
14-19	269	266	269	293	319	409	461	446	296	308	323	327	313	310	316	330	361	395	493	498	334
20-24	438	445	440	437	474	505	506	503	436	453	450	455	447	451	460	475	513	530	525	535	477
25-44	1458	1472	1470	1495	1499	1507	1485	1486	1518	1541	1548	1544	1520	1526	1536	1562	1589	1610	1596	1593	1600
45-64	988	992	1004	1002	1013	1010	992	999	1000	1019	1022	1019	1013	1012	1016	1014	1018	1023	1016	1024	1039
65+	67	62	67	69	69	67	62	65	64	65	66	63	66	65	62	63	64	61	56	59	63
TOTAL*	3315	3349	3336	3365	3353	3404	3344	3371	3328	3389	3426	3423	3449	3461	3475	3508	3520	3515	3520	3579	3536
UNEMPLOYED																					
14-19	36	35	31	33	28	59	38	30	27	32	26	31	34	41	38	32	34	53	45	37	35
20-24	37	37	35	36	34	35	29	31	34	28	26	30	40	38	31	33	36	34	24	34	32
25-44	59	57	57	52	40	39	41	44	44	41	38	42	57	64	66	51	45	41	40	46	45
45-64	35	41	34	34	27	16	19	17	22	24	25	30	37	37	35	31	23	19	19	22	23
65+	2	3	3	2	2	2	2	1	1	2	2	3	4	4	3	2	1	2	2	2	2
TOTAL*	145	142	137	139	132	128	127	144	165	166	141	155	149	155	153	131	142	131	147	163	165
UNEMPLOYMENT RATE																					
14-19	11.8	11.6	10.3	10.1	8.1	12.6	7.6	6.3	8.4	9.4	7.5	8.7	9.8	11.7	10.7	8.8	8.6	11.8	8.4	6.9	9.5
20-24	7.8	7.7	7.4	7.6	6.7	6.5	5.4	5.8	7.2	5.8	5.5	6.2	8.2	7.8	6.3	6.5	6.6	6.0	4.3	6.0	6.3
25-44	3.9	3.7	3.7	3.4	2.6	2.5	2.7	2.9	2.8	2.6	2.4	2.7	3.6	4.0	4.1	3.2	2.8	2.5	2.4	2.8	2.7
45-64	3.4	4.0	3.3	3.3	2.6	1.6	1.9	1.7	2.2	2.3	2.4	2.9	3.5	3.5	3.3	3.0	2.2	1.8	1.8	2.1	2.2
65+	2.9	4.6	4.3	2.8	2.8	2.9	3.1	1.5	1.5	3.0	2.9	4.6	5.7	5.8	4.6	3.1	1.5	3.2	3.4	3.3	3.1
TOTAL*	4.2	4.1	3.9	4.0	3.8	3.6	3.7	4.1	4.7	4.7	4.0	4.3	4.1	4.3	4.2	3.6	3.9	3.6	4.0	4.4	4.5

SOURCE: Statistics Canada. Unpublished data from Labour Force Survey. The figures on unemployed were derived by the authors from data on labour force and employment. The reader is cautioned that due to higher sampling variability, the estimates of unemployed and unemployment rate are less reliable than estimates of labour force and employed.

* / Seasonally adjusted.

TABLE 10

Unemployed and Unemployment Rates by Sex and Age for Ontario
Average for January-September 1969-1974

	(Thousands)						Change Between	
	1969	1970	1971	1972	1973	1974	1969-71	1971-74
<u>UNEMPLOYED</u>								
<u>Men</u>	69	98	124	114	96	97	55	-27
Under 25	25	40	54	51	43	44	29	-10
Over 25	44	58	70	63	53	53	26	-17
<u>Women</u>	28	38	53	53	51	57	25	4
Under 25	15	20	28	27	27	28	13	0
Over 25	13	18	25	26	24	29	12	4
TOTAL	97	136	177	167	147	154	80	-23
<u>UNEMPLOYMENT RATE</u>								
<u>Men</u>	3.4	4.7	5.8	5.1	4.2	4.1	2.4	-1.7
Under 25	6.1	9.3	12.2	10.6	8.6	8.3	6.1	-3.9
Over 25	2.7	3.5	4.1	3.6	3.0	2.9	1.4	-1.2
<u>Women</u>	2.8	3.7	4.8	4.6	4.2	4.3	2.0	-0.5
Under 25	5.1	6.5	8.4	7.7	7.3	6.9	3.3	-1.5
Over 25	1.9	2.5	3.3	3.2	2.8	3.2	1.4	-0.1
TOTAL	3.2	4.4	5.5	4.9	4.2	4.2	2.3	-1.3

SOURCE: Statistics Canada, The Labour Force, monthly reports. Catalogue No. 71-001. The Unemployment figures are calculated by subtracting employment from labour force. The reader is cautioned that due to higher sampling variability, the estimates of unemployed and unemployment rate are less reliable than the estimates of labour force and employment.

TABLE 11

Annual Unemployment Rates for Ontario 1968-1973
By Age and Sex

							Change Between	
	1968	1969	1970	1971	1972	1973	1969-71	1971-73
Under 25								
Male	7.5	6.0	9.0	9.8	10.4	8.3	+3.8	-1.5
Female	5.7	4.8	6.2	7.8	7.1	7.1	+2.0	-0.7
TOTAL	6.7	5.5	7.9	9.1	9.0	7.8	+3.6	-1.3
Over 25								
Male	2.8	2.6	3.5	3.9	3.7	2.9	+1.3	-1.0
Female	2.2	1.8	2.5	3.3	3.1	2.9	+1.5	-0.4
TOTAL	2.7	2.4	3.2	3.8	3.5	2.9	+1.4	-0.9
Total								
Male	3.7	3.3	4.5	5.5	5.1	4.1	+2.2	-1.4
Female	3.3	2.8	3.7	4.7	4.3	4.1	+1.9	-0.6
TOTAL	3.6	3.1	4.3	5.2	4.8	4.1	+2.1	-1.1

SOURCE: Statistics Canada, The Labour Force, monthly reports. Catalogue No. 71-001. The Unemployment figures are calculated by subtracting employment from labour force. The reader is cautioned that due to higher sampling variability, the estimates of unemployed and unemployment rate are less reliable than the estimates of labour force and employment.

TABLE 12

Annual Average Rates of Growth of
Selected Economic Indicators and Employment
Canada 1963-73

	<u>1963-66</u> (per cent)	<u>1967-72</u> (per cent)	<u>1972</u> (per cent)	<u>1973</u> (per cent)
Gross National Product (constant 1961 \$)	6.8	4.8	5.8	7.1
Gross Fixed Capital Formation (constant 1961 \$ per capita)	9.97	3.5	3.6	10.4
Index of Industrial Production	8.2	5.4	6.8	8.3
<u>Employment In</u>				
Manufacturing	5.2	.05	1.7	4.9
Durables	7.1	.05	2.7	6.5
Non-Durables	3.4	.05	0.8	3.1
Forestry	3.2	-5.4	-4.1	13.7
Construction	8.9	-2.7	-5.0	0.4
Trade	5.7	3.1	4.2	6.0
Commercial Services	9.5	5.7	3.8	6.2
Public Administration	2.8	4.9	5.0	7.2

SOURCE: Sylvia Ostry, "How Tight Are Labour Markets?"
Speech to Conference Board of Canada,
April 16, 1974, Tables 1 and 2.

TABLE 13

Referrals and Placements
Canada Manpower Centres, Ontario 1969-1974

		Referrals	Placements	Placements as % of Referrals
Annual	1969	639,814	289,112	45.2
	1970	577,501	235,036	40.7
	1971	749,314	316,627	42.3
	1972	923,301	386,086	41.8
	1973	1,115,504	424,422	38.0
January	1972	273,867	112,655	41.1
to	1973	325,050	123,233	37.9
April	1974	363,582	106,502	29.3

SOURCE: Canada Department of Manpower and Immigration,
Canada Manpower Review, Vol. 7, No. 3, Third
Quarter, 1974. pp. 34-35.

TABLE 14

Percentage Distributions of Unemployment Insurance
Claimants, Labour Force, and Unemployed, by Age -
Ontario: First and Second Quarters, 1974

Age	Percentage Distribution				
	Unemployment Insurance Claimants			Labour Force	Unemployed
	Male	Female	Total		
<u>FIRST QUARTER</u>					
0 - 20	13.7	12.3	13.2	12.6	25.6
21 - 35	42.1	46.4	43.9	37.6)	52.8
36 - 45	16.5	17.5	16.9	20.2)	
46 - 64	23.1	22.0	22.6	27.7	19.3
65+	4.6	1.8	3.4	1.9	2.3
TOTAL	100.0	100.0	100.0	100.0	100.0
<u>SECOND QUARTER</u>					
0 - 20	13.8	12.2	13.0	13.9	32.0
21 - 35	44.7	48.8	46.7	26.1)	51.0
36 - 45	14.6	16.5	15.5	21.4)	
46 - 64	21.3	20.7	21.0	26.9	15.9
65+	5.6	1.8	3.8	1.8	1.2
TOTAL	100.0	100.0	100.0	100.0	100.0

NOTE: The labour force figures are from unpublished data from the Statistics Canada Labour Force Survey. The unemployed were derived by the authors from labour force and employment estimates from the Labour Force Survey. The reader is cautioned that due to higher sampling variability, the estimates of unemployed are less reliable than the estimates of labour force and employment released by Statistics Canada. The Statistics Canada figures for labour force by age and the authors' estimates of unemployed by age were adjusted by the authors to correspond to the age categories for which unemployment insurance claimants are reported.

Source for claimants data is confidential information from the Unemployment Insurance Commission.

The data thus far available from the Unemployment Insurance Commission bring out two other points, shown in Table 15. First, in contrast to youths, females are over-represented among Unemployment Insurance claimants. Second, there was a substantial decrease in the number of Unemployment Insurance claimants (72 thousand) between the first and second quarters of 1974; much greater than the decrease in the number of unemployed (just over 31 thousand).

CONCLUSIONS

The main conclusions of the preceding analysis can be summarized as follows:

1. The labour market in Ontario as of mid-1974 appears to be very tight.
 - Job Vacancy data go back only to 1970. The labour market is tighter than at any time since at least 1970, and probably since 1966.
 - The tightest occupational labour markets are for the managerial, medicine and health, natural sciences, and processing and machining occupational groups.
 - If the economic expansion which began in 1973, but trailed off recently, resumes and continues into 1975, the labour market is likely to become even tighter, particularly for the occupational groups already in shortest supply.
2. The unemployment rate for males 25 years of age and over is under 3 per cent and close to what it was during the 'last near full-employment' year. It is likely that we now have full employment of prime age males.
 - The unemployment rate for Ontario is now one to one-and-a-half percentage points higher than what was regarded as the 'full-employment rate' during the 1960's, namely 3 per cent.
 - The main unemployment problem continues to be that of youth. The rate for the 14-19 group is about 3 times the over-all average and the rate for the 20-24 group about double the over-all rate.

TABLE 15

Percentage Distributions of Unemployment Insurance
Claimants, Labour Force, and Unemployed, by Sex -
Ontario: First and Second Quarters, 1974
(Thousands)

Sex	Unemployment Insurance Claimants		Labour Force		Unemployed	
	No.	%	No.	%	No.	%
<u>FIRST QUARTER</u>						
Male	155.5	57.5	2,279	64.3	117.0	66.2
Female	115.2	42.5	1,263	35.7	59.7	33.8
TOTAL	270.8	100.0	3,542	100.0	176.7	100.0
<u>SECOND QUARTER</u>						
Male	98.6	49.6	2,364	64.2	93.3	64.0
Female	100.3	50.4	1,318	35.8	52.3	35.9
TOTAL	198.9	100.0	3,682	100.0	145.7	100.0
<u>CHANGE BETWEEN QUARTERS</u>						
Male	-56.9		85		-23.7	
Female	-14.9		55		- 7.4	
TOTAL	-71.9		140		-31.1	
<u>PERCENTAGE CHANGE BETWEEN QUARTERS</u>						
Male	-36.6%		3.7%		-20.3%	
Female	-12.9		4.4		-12.4	
TOTAL	-26.5		4.0		-17.6	

SOURCE: Statistics Canada. Statistical Report on the Operation of the Unemployment Insurance Commission, monthly report, Catalogue No. 73-001. Statistics Canada. The Labour Force. Monthly Reports, Catalogue No. 71-001.

- .The relative employment situation of women has been growing worse. While the number of unemployed males decreased substantially between 1971 and 1974 (based on first eight months average for each year), the number of unemployed females actually increased. The increase was concentrated in the group aged 25 and over. In 1973-74, the female unemployment rate surpassed the male rate. The female unemployment rate is now about one-and-a-half percentage points higher than it was during the last 'near-full-employment' year.
- 3. The data examined suggest the Unemployment Insurance and autonomous changes in attitudes toward work may be contributing factors but are not the main causes of the present paradox of vacancies and unemployment.
- 4. The main causes of the present situation appear to lie in:
 - .The suddenness of recent changes in the level and composition of economic activity.
 - .Inadequacies in the way we facilitate entry into the labour market.
 - .Failure to utilize adequately women, youths, various minorities, and persons in lagging regions.
 - .Reluctance of employers and social planners to treat labour as a resource to be developed and planned for over a long-term horizon, rather than as if it flowed from a tap to be turned on and off instantaneously in response to immediate economic conditions.
 - .As a consequence, during the slow growth period of 1967-72, the 'manpower pipeline' was effectively broken. Once broken, it could not be repaired in time for the sudden expansion which began in 1973.

These conclusions have the following policy implications:

The most pressing need is for improvements in the way we develop and utilize Ontario's human resources, particularly those of youth, women, and minorities. Both employers and the education and training system must be guided by longer term considerations in their planning for manpower

development. We must do a lot better job of facilitating entry into satisfactory employment for youth, women, and minorities.

It is easier to point to the need for such improvements than it is to identify specific policy measures which will bring them about. However, a few suggestions can be given.

- Anything that would facilitate longer term operational budgeting for both educational institutions and employers would remove one of the major obstacles to manpower planning.
- More imaginative approaches to subsidized on-the-job training and experience, particularly for youths, should be considered. Subsidized employment has a somewhat tarnished record, but it has been used most during slack times, and may be far more successful in a tight labour market.
- The government might provide technical assistance to help employers develop methods of human resource planning, and to sell them on the benefits of such planning.
- Affirmative action programmes for women and minorities will likely make positive contributions to the utilization of the labour potential of these groups. As such, the manpower justification of affirmative action programmes should be emphasized as well as the social justification.
- Unemployment Insurance does contribute to the unemployment-vacancy problem, but its contribution has been over-emphasized by the press. Attacks on the Unemployment Insurance System serve mainly to divert attention away from more fundamental manpower concerns.
- Immigration may be appropriate as a selective tool to deal with specific occupational shortages where the 'manpower pipeline' cannot be established or re-established quickly enough. It should not be regarded as a general answer to vacancy problems. Doing so would perpetuate the 'turning-the-tap-on-and-off' approach to manpower utilization that has contributed so much to the present manpower problems.

- In view of the near full-employment situation that exists presently for prime age males, the extent to which we should use immigration for meeting manpower needs depends upon the extent to which we wish to encourage the employment of youths and females in jobs formerly filled by prime age males.
- The tight labour market conditions, now and expected for 1975, cause us to question the appropriateness of establishing large job creation programmes. It is difficult to see how such programmes could fail to make the vacancy situation worse, unless they are extremely discriminatory. The urgent need is to bring those presently excluded into the main labour market, not to create a separate sector for them.

